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C L A I M S

1. A cooling device (1) for a fuel-recirculation circuit from the injection system to the tank of a motor vehicle, comprising a pipe (2) designed to be traversed by the fuel and comprising a side wall (5), characterized in that said side wall (5) has at least one internal projection (7) obtained by plastic deformation of said side wall (5).

5 10 2. The cooling device according to Claim 1, characterized in that said pipe (2) is coiled.

15 3. The cooling device according to Claim 2, characterized in that said coiled pipe (2) comprises an alternating succession of elbows (3) and rectilinear stretches (4).

4. The cooling device according to Claim 2 or Claim 3, characterized in that it comprises a plurality of said projections (7).

20 5. The cooling device according to Claim 4, characterized in that said projections (7) are made on said rectilinear stretches (4).

25 6. The cooling device according to any one of the preceding claims, characterized in that said projection or projections (7) extend longitudinally.

30 7. The cooling device according to any one of the preceding claims, characterized in that said side wall (5) is entirely surrounded with a cooling current of air.

35 8. The cooling device according to any one of the preceding claims, characterized in that it does not comprise a radiating plate connected in a direct thermal exchange manner to said pipe (2).